



High Definition DIGITAL VIDEO RECORDER

OWNER'S MANUAL

MODELS: LST-5402P
LST-5403P



Before connecting, operating or adjusting this product,
please read this owner's manual carefully and completely.

Safety Precautions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT AND FULLY INSERT.

CAUTION

DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY WITHOUT WRITTEN AUTHORIZATION FROM LG ELECTRONICS CORPORATION. UNAUTHORIZED MODIFICATION COULD VOID THE USER'S AUTHORITY TO OPERATE THIS PRODUCT.

THIS EQUIPMENT IS INTENDED TO RECEIVE AND DECODE SIGNALS TRANSMITTED ACCORDING TO DVB AND IS INTENDED TO BE USED WITH AN APPROPRIATE ANTENNA AND DISPLAY DEVICE THAT YOU MUST PROVIDE.

CAUTION:

- The appliance is not intended for use by young children or infirm persons without supervision.
- Young Children should be supervised to ensure that they do not play with appliance.
- If the appliance is supplied from a cord extension set or an electrical portable outlet device, the cord extension set on electrical portable outlet device must be positioned so that it is not subject to splashing or ingress of moisture.

About the internal hard disk drive

The internal hard disk drive (HDD) is a fragile piece of equipment. Please use the recorder following the guidelines below to protect against possible HDD failure or to protect against accidental loss.

- Do not move the recorder while it is on.
- Install and use the recorder on a stable, level surface.
- Do not block the rear vent/cooling fan.
- Do not use the recorder in excessively hot or humid places, or in places that may be subject to sudden changes in temperature. Sudden changes in temperature can cause condensation to form inside the recorder. This can be a cause of HDD failure.
- While the recorder is switched on, do not unplug from the wall socket or switch the electricity off from the breaker switch.
- Do not move the recorder immediately after switching it off. If you need to move the recorder, please follow the steps below:
 1. After the message POWER OFF is shown in the display, wait at least two minutes.
 2. Unplug from the wall socket.
 3. Move the recorder.
- If there's a power failure while the recorder is on there is a chance that some data on the HDD will be lost.
- The HDD is very delicate. If used improperly or in an unsuitable environment, it is possible that the HDD will fail after a few years of use. Signs of problems include playback unexpectedly freezing and noticeable block noise (mosaic) in the picture. However, sometimes there will be no warning signs of HDD failure.
If the HDD fails, no playback of recorded material will be possible. In this case it will be necessary to replace the HDD unit.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS INSTALLATION AND OPERATING GUIDE AND THOSE MARKED ON THE UNIT. RETAIN THIS GUIDE FOR FUTURE REFERENCE.

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use, and servicing.

This unit does not contain any parts that can be repaired by the user.

DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

- 1. Read these instructions.** - All these safety and operating instructions should be read before the product is operated.
- 2. Keep these instructions.** - The safety, operating and use instructions should be retained for future reference.
- 3. Heed all warnings.** - All warnings on the product and in the operating instructions should be adhered to.
- 4. Follow all instructions.** - All operating and use instructions should be followed.
- 5. Do not use this apparatus near water.** - For example: near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement; near a swimming pool; etc.
- 6. Clean only with dry cloth.** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** - Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product, and to protect it from over-heating. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug.** A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**
- 11. Only use attachments/accessories specified by the manufacturer.**
- 12. Use only the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.**
- 13. Unplug this apparatus during lightning storms or when unused for long periods of time.**
- 14. Refer all servicing to qualified service personnel.** Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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About the symbols for instructions



Indicates hazards likely to cause harm to the unit itself or other material damage.



Indicates special operating features of this unit.



Indicates tips and hints for making the task easier.

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Front Panel Controls

Arrow Buttons (▲ / ▼ / ◀ / ▶)

Allows you to navigate on-screen menus and to adjust the system settings and preferences. Use the arrow keys to move to a menu option and then use the **OK** button to access it.

If no menu is displayed, the LEFT/RIGHT arrows control the volume setting and the UP/DOWN arrows select programs.

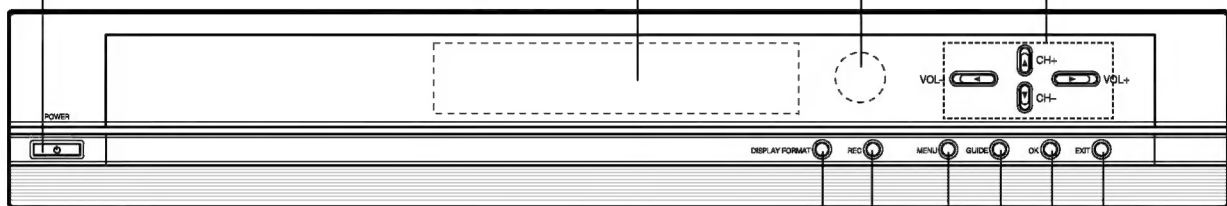
POWER

Turns the unit on or off.

Remote Control Sensor

Receives signals from the remote control.

Display Window



DISPLAY FORMAT

Sets the output resolution to 1080i, 720p, 576p, or 576i formats and chooses the correct display format for your TV or monitor. (Refer to page 17.)

RECORD

Records the viewing program.

MENU

Shows the main menu on the screen. You can return to normal viewing by pressing the EXIT button.

GUIDE

Shows the Program Guide on the screen. You can return to normal viewing by pressing the EXIT button.

OK

If the main menu is displayed, pressing the OK button will activate the highlighted MENU option. If the OK button is pressed while you are in normal viewing, the channel banner will be displayed.

EXIT

Clears all on-screen displays and returns to normal viewing from any menu.

Display Window

Standby indicator

Lights when the unit is turned off.

Resolution indicators

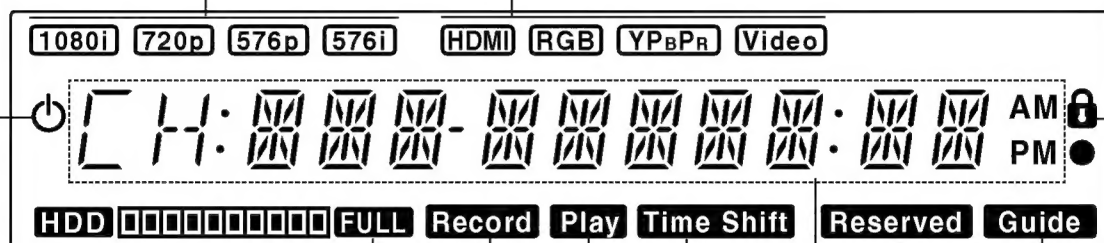
Indicates the output resolution.

Connection indicators

Indicates the output connection.

Lock Indicator

Lights if the current channel or program is locked.



Hard Disk Indicator

Indicates hard disk space used.

Disk Full Indicator

Lights when all the disk space is used.

Record Indicator

Lights when the unit is recording.

Play Indicator

Lights during playback.

Time Shift Indicator

Lights when the unit is timeshifting.

Status Indicators

Indicate channel number, program name, etc.

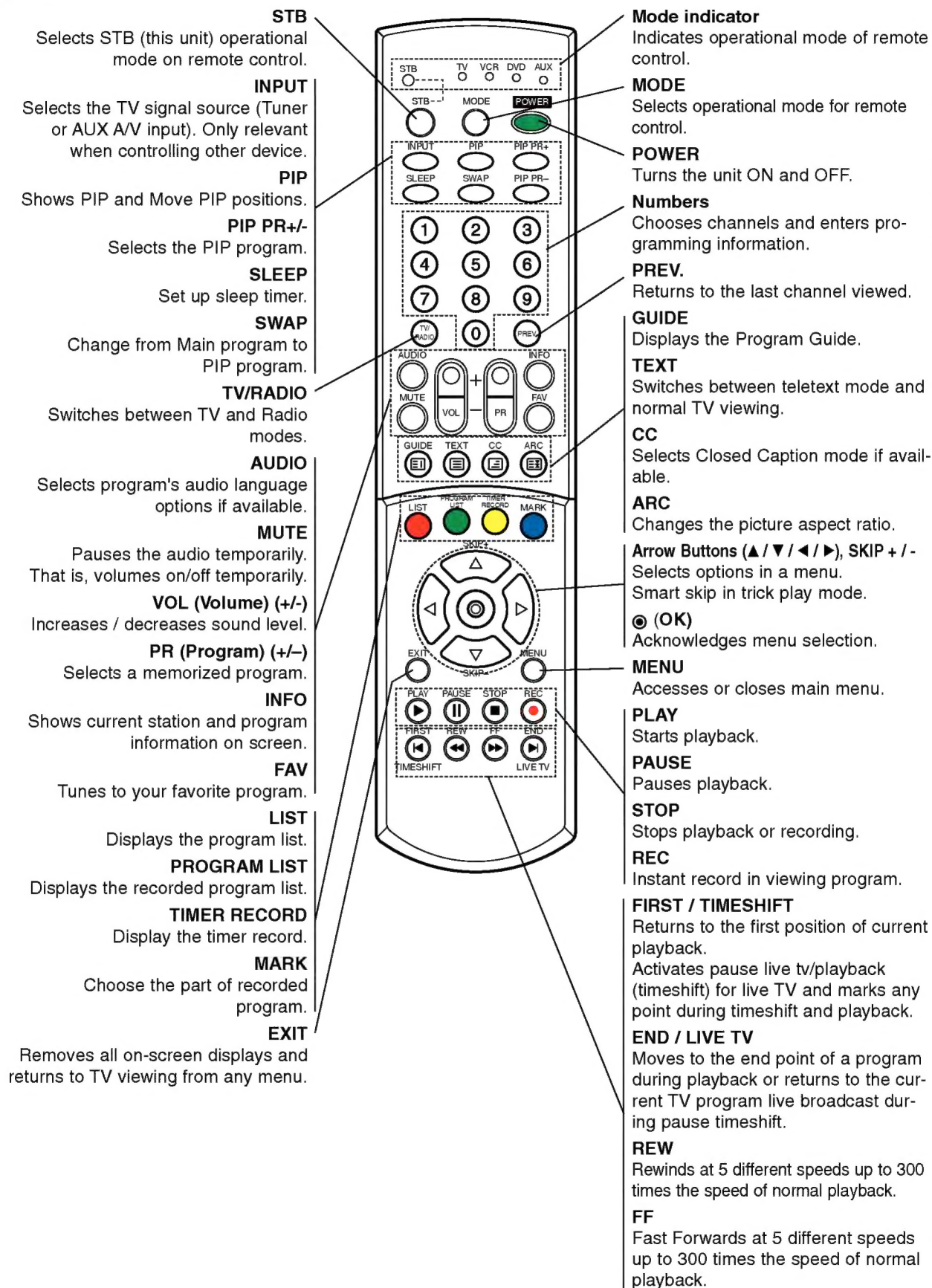
Reserved Indicator

Lights when the unit is in timer recording or a timer recording is programmed.

Guide Indicator

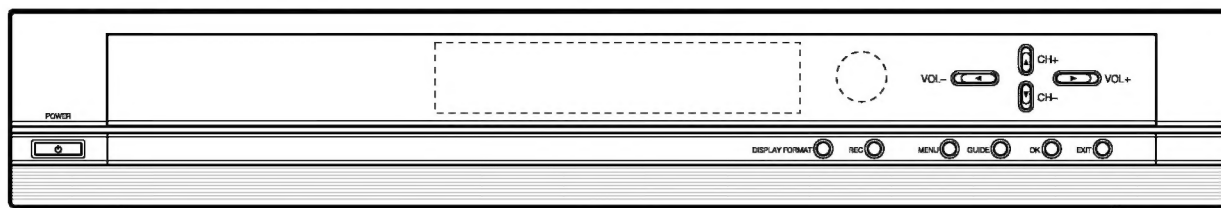
Lights when the unit shows the Program Guide.

Remote Control Key Functions



Unpacking the unit and Accessories/Connection Overview

Make sure you have received all the accessories listed below with the High Definition DIGITAL VIDEO RECORDER

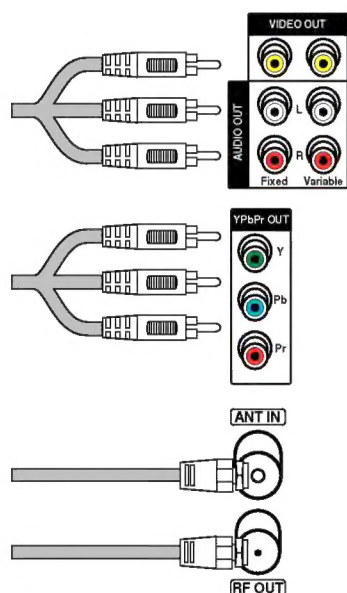


High Definition DIGITAL VIDEO RECORDER

The High Definition DIGITAL VIDEO RECORDER is capable of receiving signals from over-the-air antenna sources and sending the signals to your TV.

Included with the unit are the following accessories.

Audio Cable	Video Cable
Component (YPbPr) Cable	RF Cable
Remote Control	2 AA Batteries



Audio/Video Jacks and Cables

The Audio/Video jacks provide excellent picture and sound quality. They are used for making most Audio/Video connections between components. The Audio/Video jacks may be color coded (yellow for video, red for right audio, and white for left audio). If your component has only one input for audio (mono), connect it to the left (white L/mono) audio jack on the unit.

Component Out Jacks and Cables

Component Cables are used to connect the unit to an industry standard YPbPr compatible HD Monitor (green for Y, blue for Pb, and red for Pr). Remember to connect the left and right audio cables. The YPbPr Component jacks carry only the picture signals, not the sound.

RF OUT Jack, and RF Cable

RF OUT provides an RF connection between the unit and the TV and provides the signal of ANT IN jack to TV.

Remote Control

In addition to the unit, the remote control can be programmed to control many other devices.

Remote Control Operation Range

Point the remote control at the remote sensor and press the buttons.

- **Distance:** About 7 m from the front of the remote sensor.
- **Angle:** About 30° in each direction of the front of the remote sensor.

Remote Control Battery Installation

Remove the battery cover on the rear of the remote control, and insert two batteries (size AA) with

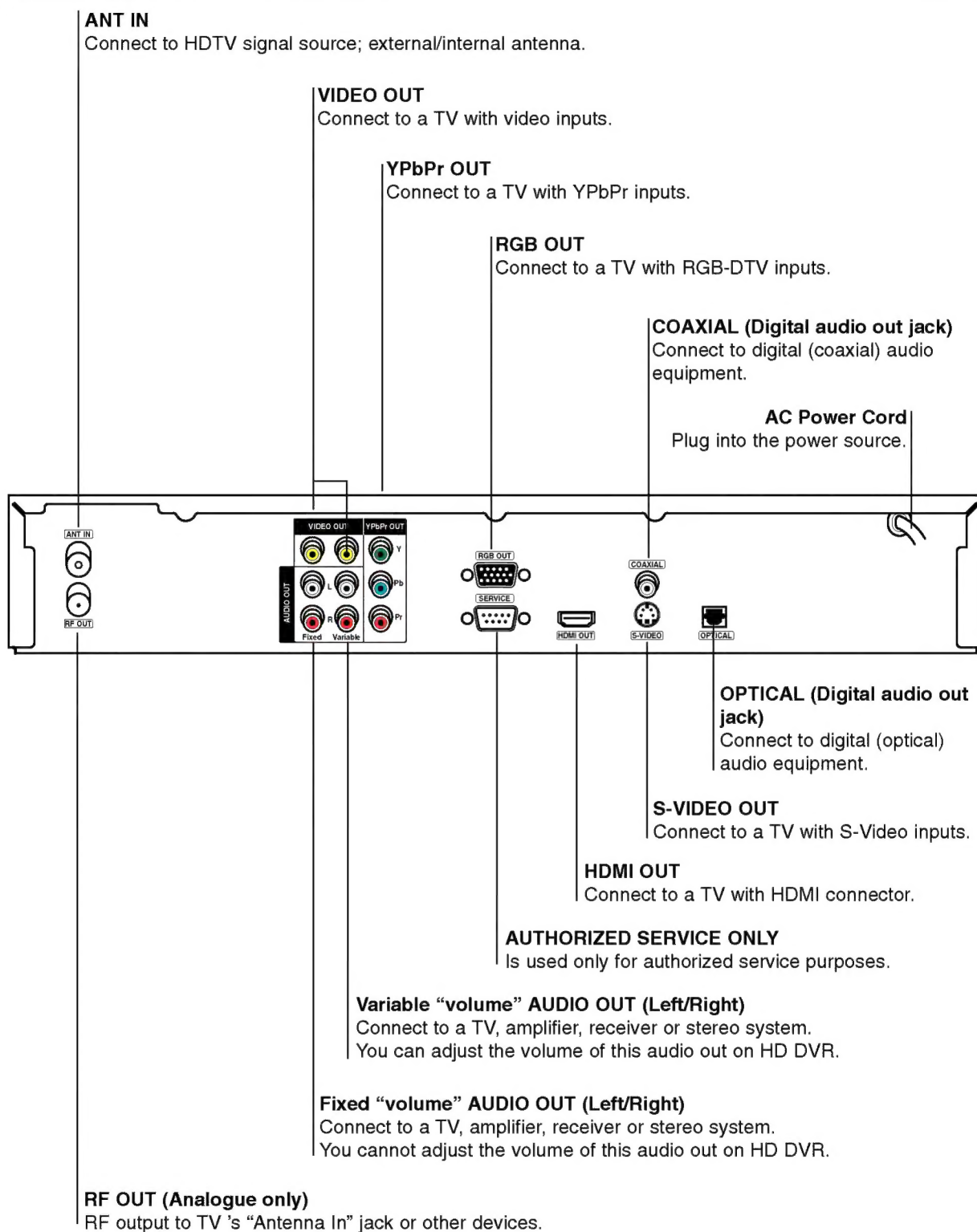
⊕ and ⊖ aligned correctly. Reinstall cover.



Caution

Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).

Connection Panel Overview



Do not touch the inner pins of the jacks on the rear panel.
Electrostatic discharge may cause permanent damage to the unit.

Connections

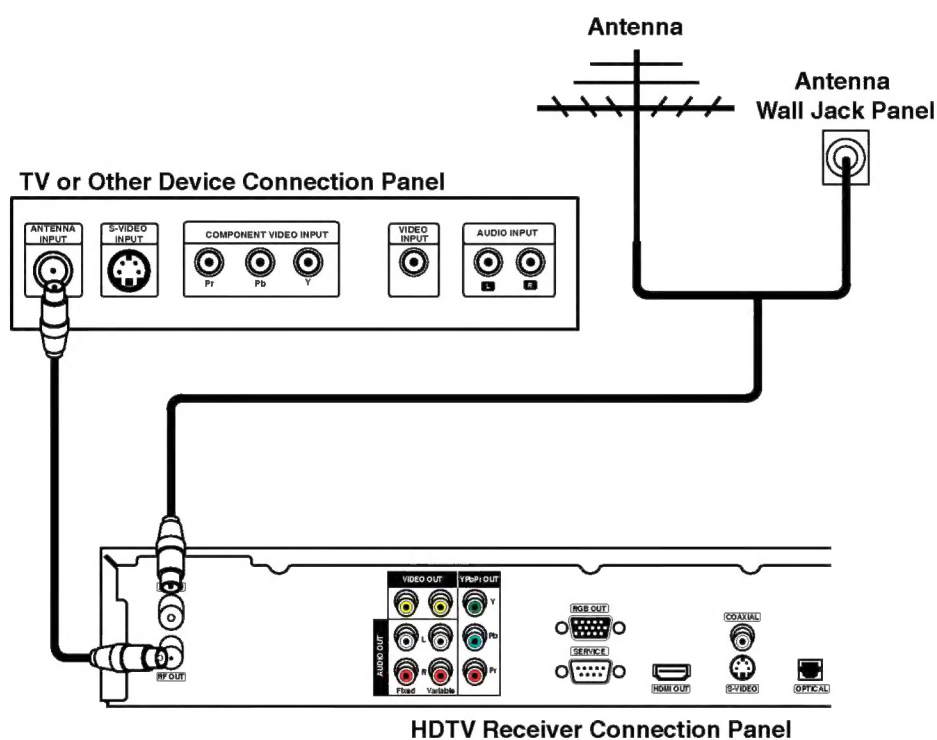
Antenna Connections

- 1 Connect the “Antenna” to the “ANT IN” jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the “ANT IN” jack. Contact local Antenna Installer if signal is too strong.

- 2 Connect the “RF OUT” jack on the unit to the “Antenna In” jack on your TV using a coaxial RF cable.

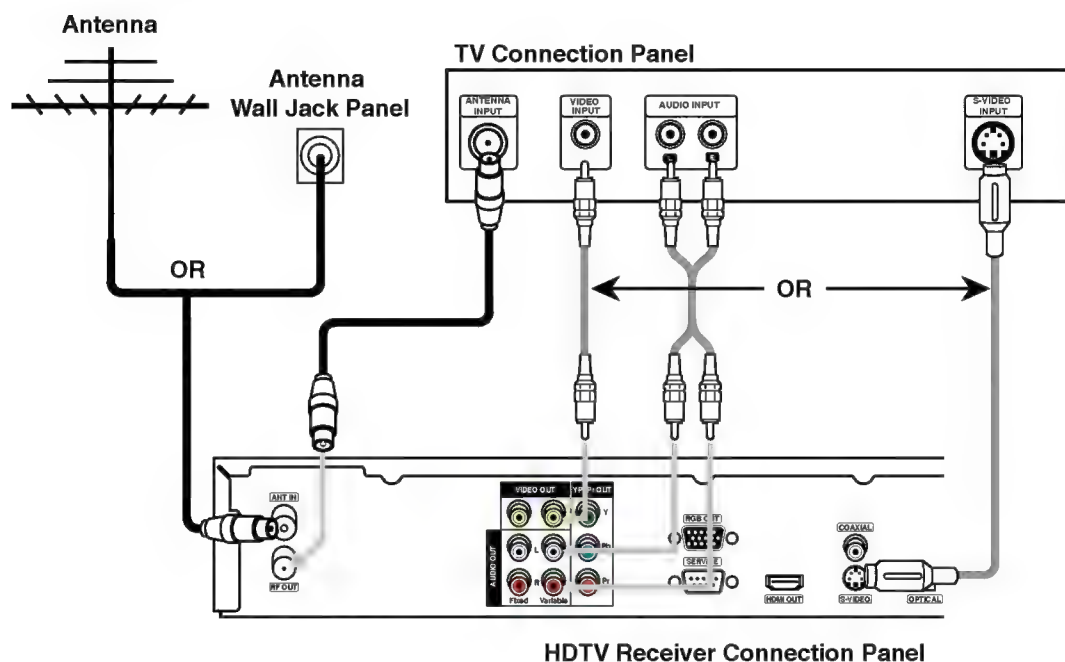


Connections (Continued)

Display Formats Overview

- The unit offers various display formats and multiple video outputs. When the HDTV Tuner is connected to A/V systems, the HDTV Tuner can provide video signal formats 1080i, 720p, 576p, and 576i.
- 1080i, 720p, 576p, and 576i modes are available for Component video (YPbPr) outputs.
- 1080i, 720p, and 576p modes are available for RGB and HDMI outputs.
- 576i mode is available for VIDEO, S-VIDEO, and COMPONENT VIDEO outputs.
- The HDTV Tuner has two digital audio outputs; Dolby Digital 5.1 and PCM. The HDTV Tuner sends out a digital audio signal to OPTICAL and COAXIAL audio outputs when digital broadcasts are being received by the HDTV Tuner.

Analogue Monitor Connections



- 1 Connect the "Antenna" to the "ANT IN" jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the "ANT IN" jack. (Refer to page 10.)

- 2 Connect the "RF OUT" jack on the unit to the "Antenna In" jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

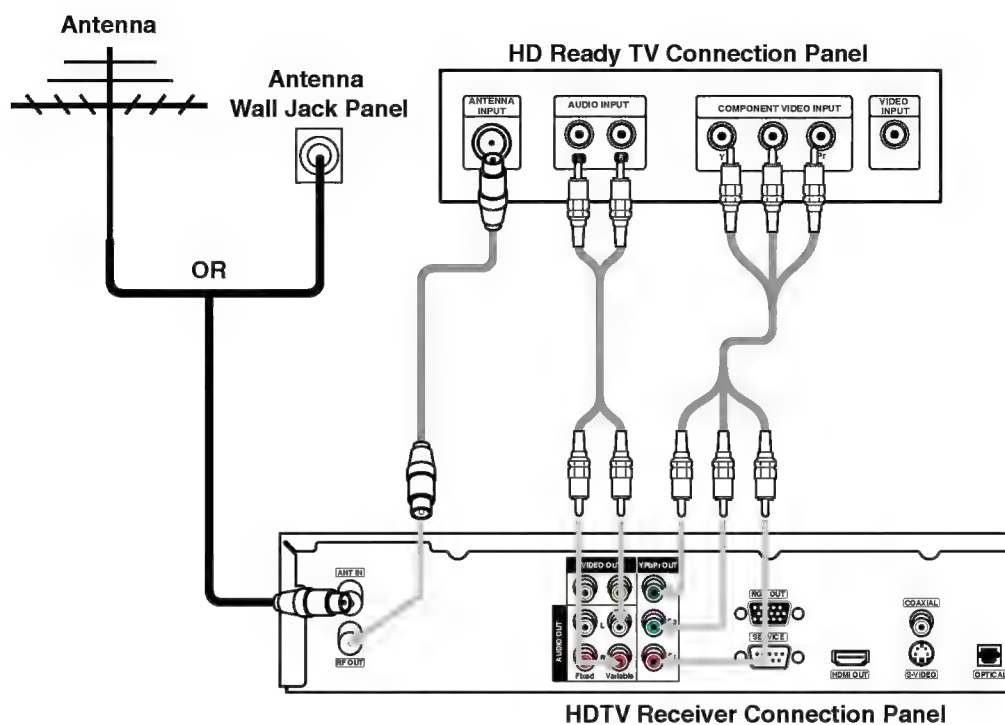
- 3 Connect the "AUDIO OUT" and "VIDEO OUT" jacks on the unit to the "A/V IN" jacks on your TV using RCA-type cables. If your TV is equipped with an S-Video jack, use the S-VIDEO OUT jack. (The Output Selection must be set to YPbPr, refer to Display Format Setup on page 17.)

Note

When using Composite VIDEO OUT (yellow connector) or S-video outputs from the unit, MENU will only appear and operate if 576i format is selected.

Connections (Continued)

HD Monitor Component (YPbPr) Connections



- 1 Connect the "Antenna" to the "ANT IN" jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the "ANT IN" jack. (Refer to page 10.)

- 2 Connect the "RF OUT" jack on the unit to the "Antenna In" jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

- 3 Connect the "COMPONENT OUT" jacks on the unit to the "COMPONENT IN" jacks of your TV using RCA-type cables. (The Output Selection must be set to YPbPr, refer to Display Format Setup on page 17.)

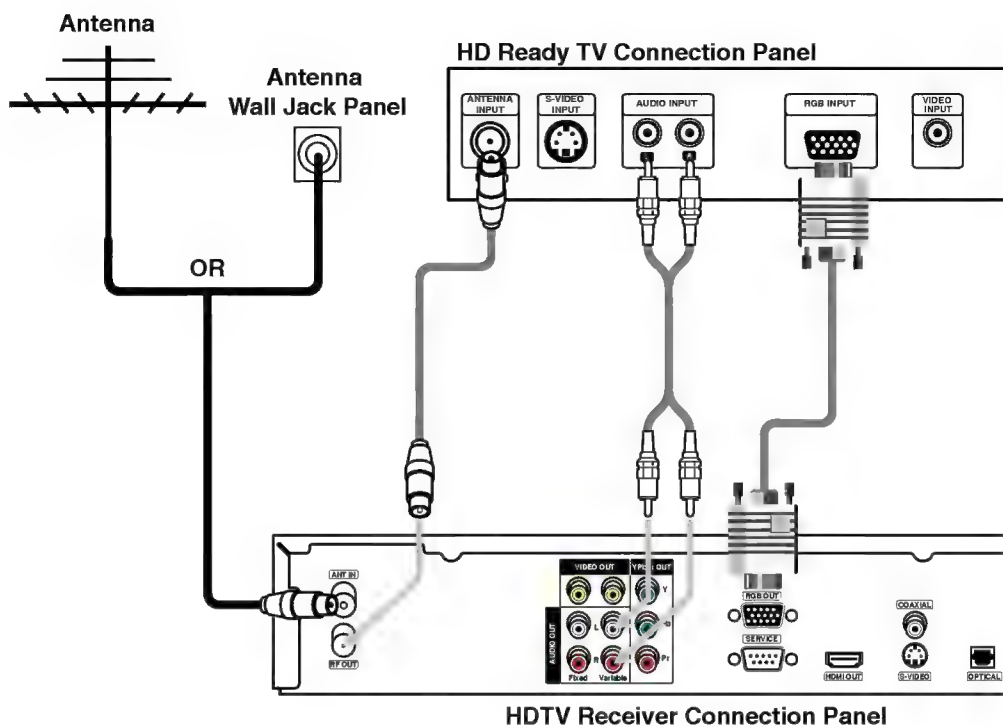
- 4 Connect the L/R "AUDIO OUT" jacks on the unit to the L/R "AUDIO IN" jacks on your TV using RCA-type cables.

Note

1080i, 720p, 576p, and 576i modes are available for component video (YPbPr) outputs.

Connections (Continued)

HD Monitor RGB Connections



- 1 Connect the "Antenna" to the "ANT IN" jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the "ANT IN" jack. (Refer to page 10.)

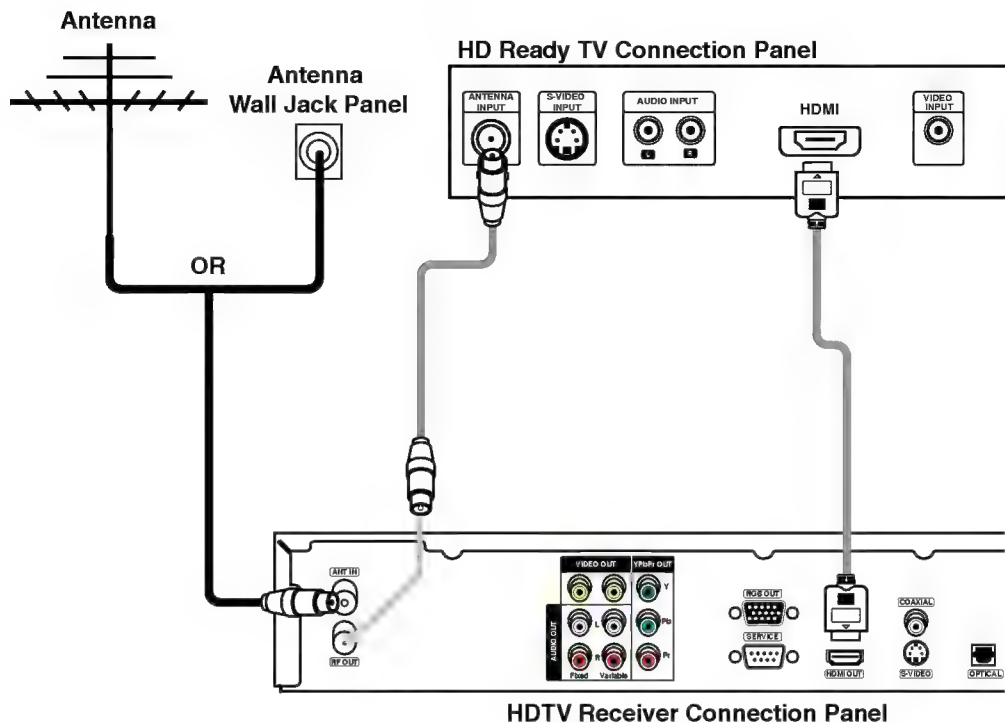
- 2 Connect the "RF OUT" jack on the unit to the "Antenna In" jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)
- 3 Connect the "RGB OUT" jack on the unit to the "RGB IN for DTV" jack of your TV using VGA-type connector. (The Output Selection must be set to RGB, refer to Display Format Setup on page 17.)
- 4 Connect the L/R "AUDIO OUT" jacks on the unit to the L/R "AUDIO IN" jacks on your TV using RCA-type cables.

Note

1080i, 720p, and 576p modes are available for RGB outputs.

Connections (Continued)

HD Monitor HDMI Connections



- 1 Connect the "Antenna" to the "ANT IN" jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the "ANT IN" jack. (Refer to page 10.)

- 2 Connect the "RF OUT" jack on the unit to the "Antenna In" jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

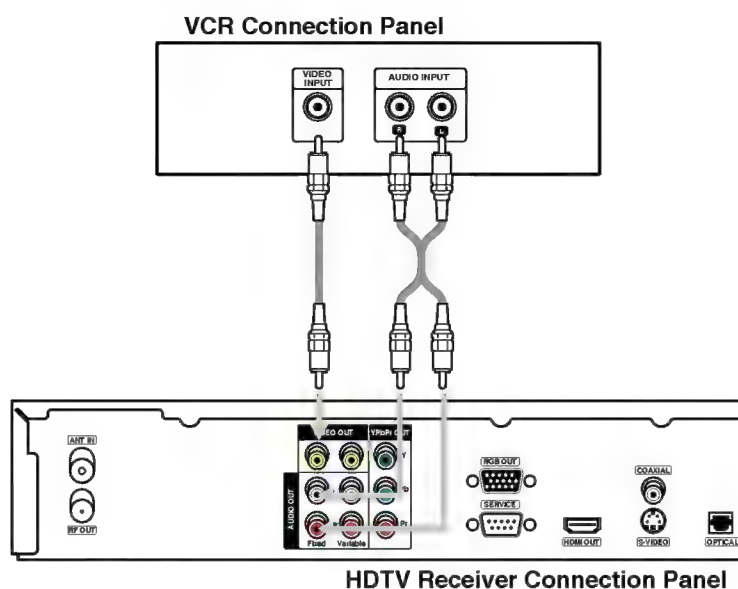
- 3 Connect the "HDMI" jack on the unit to the "HDMI IN for DTV" jack of your TV using HDMI connector. (The Output Selection must be set to HDMI, refer to Display Format Setup on page 17.)

Note

- 1080i, 720p, and 576p modes are available on HDMI outputs.
- A HDMI-HDTV input is one that is compliant with EIA-861B specifications. Check your TV or monitor's user manual to find out if the TV or monitor's HDMI input is compliant with these specifications.
- Some HD Monitors designed for PC applications using HDMI may not work with this connection.

Connections (Continued)

VCR Connections



Connect the L/R “AUDIO OUT” jacks and “VIDEO OUT” jack on the unit to the “A/V in” jacks on your VCR using RCA-type cables. (If your VCR is equipped with an S-Video jack, use the “S-Video” jack.)



Caution

If the Output Selection is set to YPbPr and 576i display format is selected, the VCR will record an onscreen display onto the tape during recording if:
the program is changed with PR (+/-)

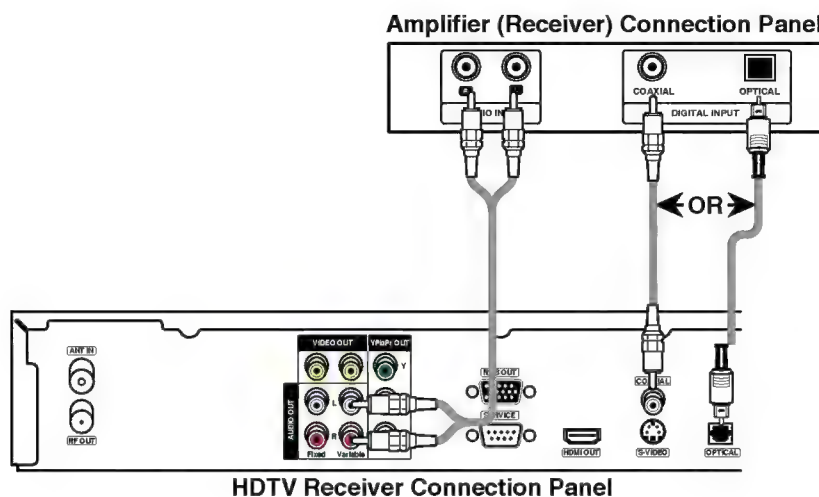


Note

The caption signal is recorded when the display format settings are set to 576i. (Refer to page 17.)

Connections (Continued)

Amplifier (Receiver) Connections



Connecting to an amplifier equipped with two channel analog stereo or Dolby Surround

Connect the Left and Right AUDIO OUT jacks on the unit to the audio left and right in jacks on your amplifier, receiver, or stereo system, using the supplied audio cables.

Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/ Video receiver equipped with a multi-channel decoder (Dolby Digital™)

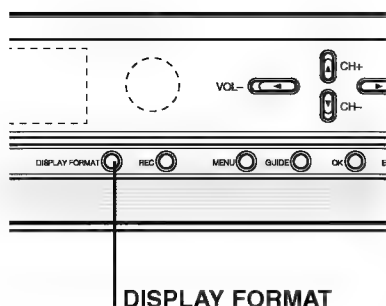
Connect one of the unit's DIGITAL AUDIO OUT jacks (OPTICAL or COAXIAL) to the corresponding input jack on your amplifier. Use an optional digital (optical or coaxial) audio cable.

Digital Multi-channel sound

A digital multi-channel connection provides the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more of the audio formats supported by your unit (Dolby Digital). Check the receiver manual and the logos on the front of the receiver.

Setting the Display Format

The unit provides several display formats. The DISPLAY FORMAT button on the front panel changes the output resolution. The output resolution may be converted from the original broadcast format.



Display Format Setup

- 1** Press **DISPLAY FORMAT** once on the front panel.
The current output signal will appear in the display window.
- 2** Depending on the type of Monitor that the unit is connected to, press **DISPLAY FORMAT** repeatedly on the front panel to select desired output connector. (YPbPr, RGB, or HDMI.)
Press **MENU** button if you wish to exit the display format setting.
- 3** Use **OK** on the front panel to confirm your output connector selection.
The current output resolution will appear in the display window.
- 4** Depending on the type of Monitor that the unit is connected to, press **DISPLAY FORMAT** repeatedly on the front panel to select desired output resolution. (1080i, 720p, 576p, 576i)
Press **MENU** button if you wish to return to the output connector setting mode.
- 5** Press **OK** on the front panel to confirm your output resolution selection.
Display Format setup is finished.

Notes

- You can exit Display Format Setup mode by pressing **EXIT** on the front panel.
- The S-VIDEO and VIDEO OUT jacks' signals are converted from all formats to 576i format.
- When using Composite video or S-video outputs from the unit, on-screen display will only appear and operate if 576i format is selected.

Display Format modes	Input Signal format	Output Signal format
1080i	all formats	1080i
720p	all formats	720p
576p	all formats	576p
576i	all formats	576i

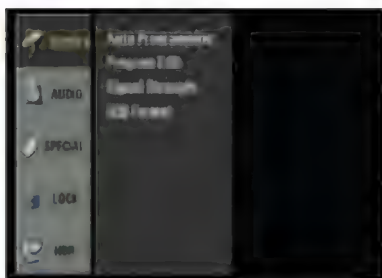
OUTPUT CONNECTION	AVAILABLE FORMATS
COMPONENT VIDEO OUT	1080i/720p/576p/576i
RGB OUT	1080i/720p/576p
HDMI OUT	1080i/720p/576p
VIDEO OUT	All formats converted to 576i
S-VIDEO OUT	All formats converted to 576i

Initial Settings

In this menu system, there are several ways to customize the settings provided. Most menus consist of three levels to set up the options, but some require greater depth for the variety of settings. If you press the MENU button, only the first and second level of the menu system will appear on the TV screen. The third level can be displayed by pressing **OK** (OK). If a menu has more than three levels, the pop-up dialogue box will be displayed as the fourth or fifth level. For navigating the menu levels, you will see "▶" on the right side of the menu label to help you go to the next level.

To show and remove the Menu:

Press the MENU button on the remote control to display the menu. A second press of the MENU button or a press of the EXIT button will take you back to TV viewing.



To go to the next level:

Press "**OK**" (or "▶") on the remote control.

To go back to the previous level:

Press MENU (or "◀") on the remote control.

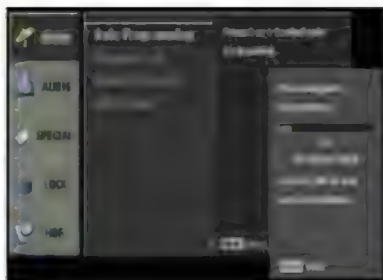
General Operation

- 1** Press MENU.
The main menu will appear.
- 2** Use ▲ / ▼ to select the desired menu option.
- 3** While the desired menu option is selected, press ▶ or **OK** (OK) to move to the second level.
- 4** Use ▲ / ▼ to select the second menu option.
- 5** Press ▶ or **OK** (OK) to move to the third level.
Some menu options require additional steps.
- 6** Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.

Note

If your TV is in zoom mode, the menu screen may be cut off.
In this case, set the TV's zoom mode to normal to display the menu properly.

Setup Menu Options



Note

PIN is needed to access the SETUP menu if [Lock System] option is set to [On].

Auto Programming

Automatically finds all programs (digital), and stores all the active programs found on the program list. Inactive or weak programs may not appear on the list.

- 1** Press MENU to display the on-screen menu.
- 2** Select the SETUP menu using ▲ / ▼ then press Ⓔ (OK) or ► to move to the second level.
- 3** Select the Auto Programming using ▲ / ▼ then press Ⓔ (OK) or ► to move to the third level.
The program search process begins. You can stop the process by pressing Ⓔ (OK), MENU or EXIT.
- 4** When program search is complete, the lowest program number found appears on the TV screen.



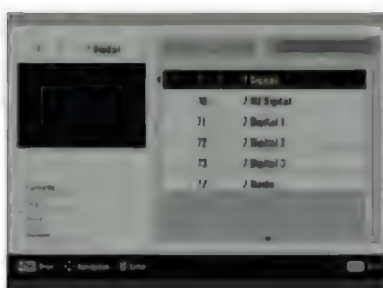
Program Edit

You can edit a channel manually (name, skip, etc.).

Note

PIN is needed to access the SETUP menu if [Lock System] option is set to [On].

- 1** Press MENU to display the on-screen menu.
- 2** Select the SETUP menu using ▲ / ▼ then press Ⓔ (OK) or ► to move to the second level.
- 3** Select the Program Edit using ▲ / ▼ then press Ⓔ (OK) or ► to move to the third level.
The Program Edit menu appears.
- 4** Use ▲ / ▼ to select a program number then ◀ to select option.
- 5** Use ▲ / ▼ to select the program option then press Ⓔ (OK).

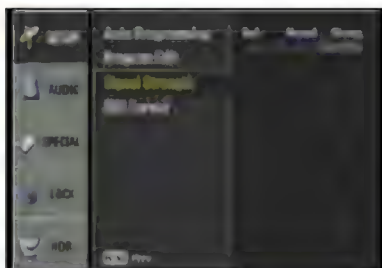


Note: If you access this menu when resolution is set to 576p, 720p, or 1080i, the VIDEO OUT and S-VIDEO OUT jacks' signals are blocked. Press EXIT button to restore the output signals.

- **Favorite:** Selects program to be favorite.
- **Skip:** Skips the selected channel.
- **Block:** Blocks the program.
- **Rename:** Changes the station name. The display for entering characters appears.
To enter characters, see page 38.

- 6** Press MENU to return to the previous screen or press EXIT on the remote control to return to TV viewing.

Setup Menu Options



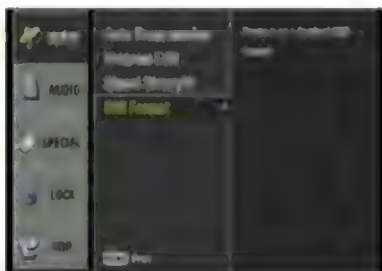
Note

PIN is needed to access the SETUP menu if [Lock System] option is set to [On].

Signal Strength

Shows the strength bar for incoming signal to help you adjust the antenna to the correct position from your location.

- 1** Press MENU to display the on-screen menu.
- 2** Select the SETUP menu using ▲ / ▼ then press Ⓞ (OK) or ►.
- 3** Select the Signal Strength using ▲ / ▼.
The signal strength bar will be displayed.
- 4** Press MENU to return to the previous screen or press EXIT on the remote control to return to TV viewing.



HDD Format

Formats the HDD (Hard Disk Drive): everything recorded on the HDD will be erased.

- 1** Press MENU to display the on-screen menu.
- 2** Select the SETUP menu using ▲ / ▼ then press Ⓞ (OK) or ►.
- 3** Select the HDD Format using ▲ / ▼ then press Ⓞ (OK) or ► to move to the third level.
The confirm message will appear.
- 4** Use ◀ / ▶ to select 'Yes' or 'No' then press ENTER.
It takes a few moments to format the HDD.
- 5** Press MENU to return to the previous screen or press EXIT on the remote control to return to TV viewing.



Caution

If you want to format the HDD, everything recorded on the HDD will be erased.

Audio Menu Options



Audio Option

The Audio Option allows you to select an audio stream for the TV program being received.

- 1** Press MENU to display the on-screen menu.
- 2** Select the Audio Option using ▲ / ▼ then press ● (OK) or ►.
- 3** Select the desired mode using ▲ / ▼.

Dolby Digital: Dolby Digital audio stream is received.

MPEG: MPEG audio stream is received.

- 4** Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.

Digital Audio Output

Sets the unit's digital Audio Output according to the type of audio system you use.



- 1** Press MENU to display the on-screen menu.
- 2** Select the AUDIO menu using ▲ / ▼ then press ● (OK) or ►.
- 3** Select the Digital Audio Out option using ▲ / ▼ then press ● (OK) or ►.
- 4** Select the desired audio output using ▲ / ▼.

Dolby Digital: Select "Dolby Digital" if you connected the unit's DIGITAL OUT jack to a Dolby Digital decoder (or an amplifier or other equipment with a Dolby Digital decoder).

PCM: Select when the unit's DIGITAL OUT jack is connected to a 2-channel digital stereo amplifier.

- 5** Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.

Notes

- If you select the "Dolby Digital" and current audio stream is not "Dolby Digital", the unit outputs the "PCM" signal from DIGITAL AUDIO OUT jacks (OPTICAL and COAXIAL).
- The "Digital Audio Out" is fixed to "PCM" when the "Audio Option" is set to "MPEG",

Special Menu Options

Screen Type

You can choose your TV type.



- 1** Press **MENU**.
The main menu appears.
- 2** Use **▲ / ▼** to select the **OPTION** menu then press **►** or **OK** to move to the second level.
- 3** Use **▲ / ▼** to select the **Screen Type** option.
- 4** Press **▲** or **OK** to move to the third level.
- 5** Use **▲ / ▼** to select an option (**16:9** or **4:3**).
16:9: Select if a 16:9 wide TV is connected.
4:3: Select if a standard 4:3 TV is connected.

Note

When changing the screen type, the TV screen will be blanked for a short while.

- 6** Press **MENU** to return to the previous menu or press **EXIT** on the remote control to return to TV viewing.

Aspect Ratio

Lets you choose the screen format according the screen ratio.



- 1** Follow steps 1-2 as shown above (Screen Type).
- 2** Use **▲ / ▼** to select the **Aspect Ratio** option.
- 3** Press **►** or **OK** to move to the third level.
- 4** Use **▲ / ▼** to select an option.
- 5** Press **MENU** to return to the previous menu or press **EXIT** on the remote control to return to TV viewing

Notes

- If the Screen Type selected is 16:9, the Aspect Ratio is set to "Letter Box (16:9)", "Full (16:9)", or "Pan and Scan (16:9)".
- If the Screen Type selected is 4:3, the Aspect Ratio is set to "Letter Box (4:3)", " Full (4:3)", or "Pan and Scan (4:3)".

Tip

- While watching TV, you can change the picture aspect ratio using **ARC** on the remote control. To view a high definition picture with 4:3 normal TV, use the ARC button on the remote control to change the wide mode (Letter Box, Full or Pan and Scan).
- To view a high definition picture with wide (16:9) TV, use the **ARC** button on the remote control to change the wide mode in the cycle (Letter Box, Full or Pan and Scan).
- To view a standard definition picture with wide (16:9) TV, use the **ARC** button on the remote control to change the wide mode in the cycle (Letter Box, Full or Pan and Scan).

Special Menu Options



Clock Set

Enables the user to adjust the time zone. Normally, your clock is set using signals transmitted by DTV stations. Choosing your time zone sets the current time automatically.

- 1** Press **MENU** to display the on-screen menu.
- 2** Select the **SPECIAL** menu using **▲ / ▼** then press **⊙** (OK) or **▶**.
- 3** Use **▲ / ▼** to select the **Clock Set** option then press **▶** or **⊙** (OK) to move to the third level.
- 4** Use **▲ / ▼** to select **On** or **Off** then press **⊙** (OK).
If you select **Off**, the clock is not set.
- 5** If you select **On**, use **▲ / ▼** to set **Time Zone**.
- 6** Press **MENU** to return to the previous menu or press **EXIT** on the remote control to return to TV viewing.

Note

- There are cases where the TV station does not send, or sends wrong date and/or time information causing the unit to set an incorrect time.
- You have no way to manually set the clock.



Caption

If the Caption option is set to **On**, Closed Caption is displayed when receiving TV program with Closed Caption signal.

If the Caption option is set to **Off**, Closed Caption is not displayed.

Note

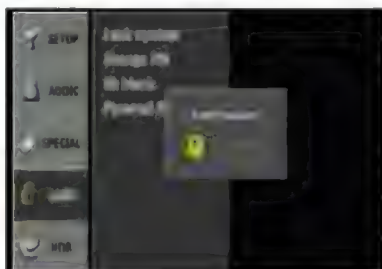
Caption will appear only if provided by the broadcaster.

Tip

- If available, you can also select a closed caption while viewing TV, press **CC** button repeatedly on the remote control.
- If captions are available, the DTV caption icon (**CC**) appears on the program information display, to indicate that you can select one of those caption options with the **CC** button.

Lock (Parental Control) Menu Options

Lock System



Allows you to set up specific programs and ratings through blocking schemes. Also allows you to activate or disable all of the lock schemes previously set up. A PIN is required to gain access to the LOCK menus. When the Lock System is set to Off, the Program and Program Rating are not effective.

- 1** Press MENU.
The main menu appears.
- 2** Use ▲ / ▼ to select the LOCK then press ► or Ⓞ (OK) to move to the second level.

When you have not entered a PIN yet;

Enter "0000" PIN using the numbered buttons.

When you have already entered a PIN;

Enter the 4-digit PIN using the numbered buttons to confirm the personal 4-digit security PIN.



- 3** Use ▲ / ▼ to select the Lock System option.
- 4** Press ► or Ⓞ (OK) to move to the third level.
- 5** Use ▲ / ▼ to select an option (On or Off).
- 6** Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.

Change PIN

Changes the PIN.

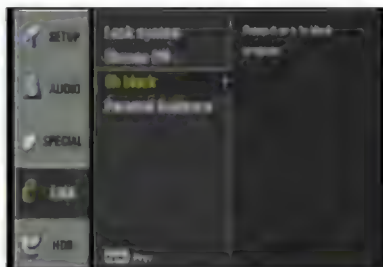


- 1** Follow steps 1-2 as shown above (Lock System).
- 2** Use ▲ / ▼ to select the Change PIN option.
- 3** Press ► or Ⓞ (OK) to move to the third level.
- 4** Enter the new 4-digit code.
- 5** Enter the same code again to verify.
- 6** Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.

Lock (Parental Control) Menu Options (Continued)

Channel Block

Blocks any program that you do not want to view or that you do not want your kids to watch. If you tune in a blocked program, a black screen with a pop-up box will appear. This menu can override Program Edit menu settings (page 19).



1 Press MENU.
The main menu appears.

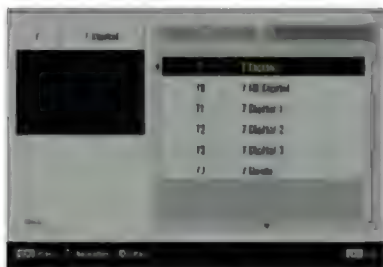
2 Use ▲ / ▼ to select the LOCK then press ► or Ⓞ (OK) to move to the second level.

When you have not entered a PIN yet;

Enter "0000" PIN using the numbered buttons.

When you have already entered a PIN;

Enter the 4-digit PIN using the numbered buttons to confirm the personal 4-digit security PIN.




Note: If you access this menu when resolution is set to 576p, 720p, or 1080i, the VIDEO OUT and S-VIDEO OUT jacks' signals are blocked. Press EXIT button to restore the output signals.

3 Use ▲ / ▼ to select the Ch Block then press ► or Ⓞ (OK).
The program list screen appears.

4 Use ▲ / ▼ / ◀ / ▶ to a program on the block program menu.

5 Press Ⓞ (OK) to block or unblock the program on the block program menu.

The  mark will appear to the right of the station name to indicate the blocked program.

4 Repeat step 3 to block or unblock additional programs in the program list menu.

5 Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.

Lock (Parental Control) Menu Options (Continued)



Parental Guidance

You can set the ratings to block out all the programs with ratings above a specified level.

- 1** Press **MENU**.
The main menu appears.
- 2** Use **▲ / ▼** to select the **LOCK** then press **▶** or **⊙** (OK) to move to the second level.

When you have not entered a PIN yet;

Enter "0000" PIN using the numbered buttons.

When you have already entered a PIN;

Enter the 4-digit PIN using the numbered buttons to confirm the personal 4-digit security PIN.

- 3** Use **▲ / ▼** to select the **Parent guidance** option.
- 4** Press **▶** or **⊙** (OK) to move to the third level.
- 5** Use **▲ / ▼** to select a rating.

G (General Audiences): Content is not offensive to most viewers.

PG (Parental Guidance Recommended): Content is such that parents may not want their children to view the program.

M (Mature Audience 15+): Mature Audience only. This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 15.

MA (Mature Adult Audience 15+): Mature Adult only. Mature Audience Only. This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 15.

AV (Adult Audience strong violence 15+)

R (Restricted 18+): Not for children under age 18. Strong elements of sex and/or violence.

Blocking Off: Cancel the blocking

- 6** Press **MENU** to return to the previous menu or press **EXIT** on the remote control to return to TV viewing.

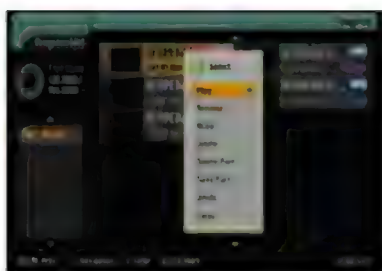
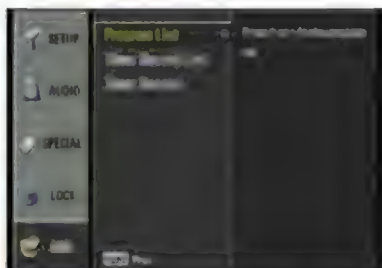
HDR Menu Operations

Program List

The Program List shows the recorded programs etc. that have been stored on the HDD (Hard Disk Drive).



You can also bring up the Program List by pressing the PROGRAM LIST button on the remote control.



Program List Setting, General Operation

- 1 Press MENU.**
The main menu appears.
- 2 Use ▲ / ▼ to select the HDR menu then press ► or ● (OK) to move to the second level.**
- 3 Use ▲ / ▼ to select the Program List option.**
- 4 Press ► or ● (OK) to display the Program List.**
The Program List shows title of the program, date, and duration.
- 5 On the Program List menu, use ◀ / ▶ to select a program.**
A series of snapshots of the selected program appear if the program remains highlighted.
- 6 Press ● (OK) to display the options.**
The options will be displayed as shown to the left.
 - **Play:** Plays back the selected program.
 - **Rename:** Rename the program title.
You can rename a program title. Key in the title using ▲ / ▼ / ◀ / ▶ or ● (OK). Then choose "OK" then press ● (OK) to install the program title.
 - **Move:** Moves the program to the another folder.
 - **Delete:** Deletes the selected program.
 - **Delete Part:** Deletes a part of the program.
 - **Save Part:** Saves a part of the program.
 - **Divide:** Divides a program into two.
 - **Close:** Closes the menu.
- 7 Press EXIT or PROGRAM LIST button to remove the Program List.**



- If the unit finds a bad sector on the hard disk, one or all programs may be deleted from Program List.
- Total number of programs on the Program List can be up to 512 per folder.

HDR Menu Operations (Continued)

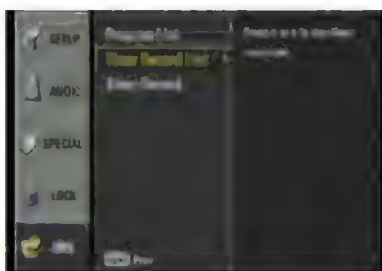
Timer Record List

The Timer Record List shows the programs you have reserved in the Timer Record menu.



You can also bring up the Timer Record List by pressing the TIMER RECORD button on the remote control.

Timer Record List Settings, General Operation



- 1** Press **MENU**.
The main menu appears.
- 2** Use **▲ / ▼** to select the HDR menu then press **▶** or **⊙** (OK) to move to the second level.
- 3** Use **▲ / ▼** to select the Timer Record List option.
- 4** Press **▶** or **⊙** (OK) to display the Timer Record List menu.
Timer Record List appears.
- 5** Use **▲ / ▼** to select a program then press **⊙** (OK) to display the menu.
The menu options will be displayed as shown to the left.
 - **Modify:** Modifies the contents of entered data for reserved program. (Refer to page 29.)
 - **Delete:** Deletes the selected program from the Timer Record List menu.
 - **Close:** Returns to the Timer Record List menu.



- 6** Press **EXIT** or **TIMER RECORD** button to remove the Timer Record List.



To program the new Timer Record Program, select "New" icon then press **⊙** (OK) in the Timer Record List menu and Timer Record menu will appear. You can create new Timer Record Program. (Refer to page 29.)



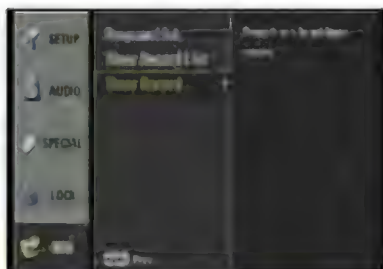
- If the disk space available is insufficient while recording, the unit will turn itself off.
- If you want to stop recording, you must press the STOP button. If you press POWER to stop recording, the program may not be recorded.

HDR Menu Operations (Continued)

Timer Record

This unit can be programmed to record up to 20 programs within a period of 1 month. Simply enter the channel to be recorded, the starting time and duration for each recording.

Timer Record Settings, General Operation



- 1** Press **MENU**.
The main menu appears.
- 2** Use **▲ / ▼** to select the HDR menu then press **▶** or **⊙** (OK) to move to the second level.
- 3** Use **▲ / ▼** to select the Timer Record option.
- 4** Press **▶** or **⊙** (OK) to display the Timer Record menu.
- 5** On the Timer Record menu, use **◀ / ▶** to move to next or previous column then use **▲ / ▼** to select a setting for the selected column.
 - **Program:** Selects the program number to record.
 - **Date:** Selects recording date.
 - **Start Time:** Selects recording start time.
 - **Duration:** Selects recording duration.
 - **Mode:** Selects recording repeat option.
 - Once...The unit is to record a reserved program once.
 - Daily...The unit is to record a reserved program daily.
 - Weekly...The unit is to record a reserved program every week.
 - Weekend...The unit is to record a reserved program every weekend (Saturday - Sunday).
 - Weekday...The unit is to record a reserved program every weekday (Monday - Friday).
- 6** Press **⊙** (OK) to reserve your selection.
The input data is stored into the unit.
If you press the EXIT button at step 6, the entered data is not memorized.

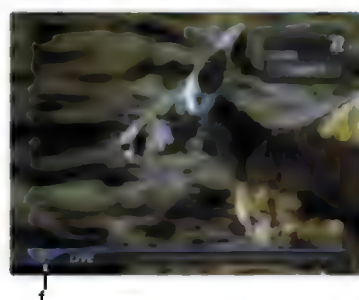
Tip

You can view the Timer Record Program information you have programmed by pressing the PROGRAM LIST button on the remote control.

Notes

- The minimum recording time is 1 minute for TV channel and 2 minutes for radio channel. If recorded time is shorter than the minimum recording time, the file is not saved.
- If the disk space available is insufficient while recording, the unit will turn itself off.
- If you want to stop recording, you must press the STOP button. If you press POWER to stop recording, the program may not be recorded.
- If new timer recording entry conflicts with existing entry, new entry will not be saved.

Information Displays



Program Banner Display

The Program Banner appears whenever you tune to a new program or press the **OK** button on the remote control while viewing a program.

1 Press **OK** while watching a program.

The Program Banner appears on the TV screen (program number, digital picture grade, audio, station name, and current time).

- The Program Banner will be displayed on the TV screen for a moment then disappear.

- a) Digital Picture Grade
Displays the digital picture grade such as HD (High Definition) or SD (Standard Definition).
- b) Audio Format type (Dolby Digital, MPEG I, MPEG II)
Indicates audio track is Dolby Digital, MPEG I, or MPEG II.
- c) Program number and Station name
Displays the current program number and station name.
- d) Displays Program number
- e) Displays progress bar for playback, live TV, or Delayed-Timeshift playback.
- f) Displays elapsed time.

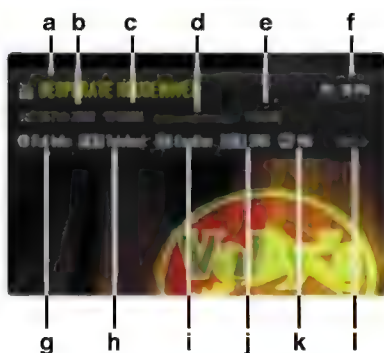
2 Press **OK** again while the Program Banner is displayed.

The Program Banner disappears from the TV screen.

Notes

- Station name and clock are displayed only if they are set up by broadcast.
- If program scrambled, may not be able to see the program.

Information Displays (Continued)



Program Information Display

The Program Information appears whenever you press the INFO button on the remote control while viewing a program.

1 Press INFO while watching a program

Program Information appears on the TV screen.

- a) Program title
Indicates title of current program.
- b) Date
Displays the start date.
- c) Start Time
Displays the start time for the current program.
- d) Progress bar
Displays elapsed time.
- e) End Time
Displays the end time for the current program.
- f) Clock
Displays the current clock.
- g) Full Information
Indicates that there is a full information available to provide detailed descriptions of the program.
- h) Text Information
Indicates that there is teletext information available.
- i) Digital Closed Caption Icon
Indicates that the current program contains digital closed caption data service.
- j) Wide Icon (16:9) and Digital Picture Grade
Indicates that the current program is shown in wide picture format.
Displays the digital picture grade such as HD (High Definition) or SD (Standard Definition).
- k) Content Advisory Icon
Content Advisory data is used for the parental guide control to block programs that are beyond predefined rating criteria set by users. This icon means that the current program contains content advisory data, and displays rating value of program.
- l) Previous or Next selection
Indicates the information is for next or previous program. Use ◀ / ▶ to change between Next or Previous.

2 Press INFO or EXIT while the Program Information is displayed.

The Program Information disappears from the TV screen.

Note

Station name and clock are displayed only if they are set up by broadcast.

Program Guide



The Program Guide contains schedule and program information for all programs. They also provide local over-the-air programs information including conventional digital programs. Use the Program Guide to find programs easily and conveniently and to view schedule and descriptive program information for the programs.

To Display the Program Guide

Press the GUIDE button on your remote control.

To Exit the Program Guide

Press the EXIT button to return to the last program you were viewing.

To Navigate through programs on the Guides

Use ◀ / ▶ / ▲ / ▼ on your remote control to navigate the guide screen.

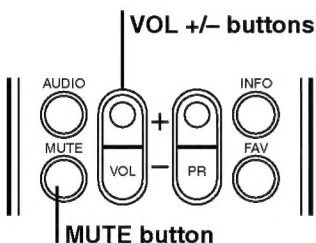
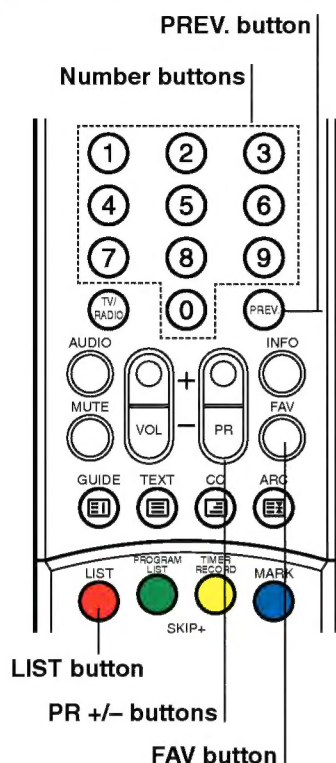
To Tune to another current program

Use ◀ / ▶ / ▲ / ▼ to select a current program then press ● (OK). You can watch the program.

To Display the Full Information window

You can view detailed information of the highlighted program if available. Press INFO to display detailed information window. To exit the detailed information window, press INFO again.

Normal Operation



Program Selection

You can select a program as shown below.

Number buttons (on the remote control)

Use **Number (0-9)** buttons to select a program directly.

PREV. button (on the remote control)

Press to return to the previous program being viewed. For example, if the unit is tuned to program 55 and then you change to program 56, pressing PREV. will return to program 55.

FAV button (on the remote control)

Press to scroll through your favorite programs.

PR +/- buttons (on the remote control) or ▲ / ▼ (on the front panel)

Use PR +/- on the remote control or ▲ / ▼ on the front panel to cycle the unit through the programs in memory.

LIST buttons

Press LIST on the remote control and Program List appears. Use ▲ / ▼ to select a program that you want to view. Whenever you press the TV/RADIO button while the program list is displayed, the program list will be switched between TV and Radio program list.

Volume Adjustment

Adjusts the volume of analogue audio out on unit.

VOL +/- buttons (on the remote control) or ◀ / ▶ (on the front panel)

Use VOL +/- on the remote control or ◀ / ▶ on the front panel to adjust the volume for analogue audio out on the unit.

MUTE (on the remote control)

Press MUTE to turn off the volume for analogue/digital audio out on the unit.

Notes

- Before setting Audio Variable to Off, make sure that you have turned down the TV's volume to the minimum. Otherwise, sudden high volume sound may cause hearing or speaker damage.
- The volume of digital audio out on unit can not be adjusted on the unit.

Recording Setup Options

Note

The minimum recording time is 1 minute for TV channel and 2 minutes for radio channel. If recorded time is shorter than the minimum recording time, the file is not saved.

Normal Recording

Follow the instructions below to record a TV program. Recording starts immediately and allows you to make a recording easily of a preset length without using the Time Record menu.

In live TV mode

- 1** Select the desired channel with PR (+/-).
- 2** Press REC.
Recording will start. The menu as illustrated to the left, will appear on the TV screen.
- 3** Press ▲ / ▼ repeatedly to select the recording time length.
Each press of ▲ / ▼ button changes the recording duration in the sequence shown below.
Unlimited → 5 min → 10 min → 15 min → 20 min → → 960 min
- 4** Press ● (OK).
The elapsed recording time indicator appears on the screen.
Press EXIT to remove indicator.
- 5** Press STOP to stop recording.

Note

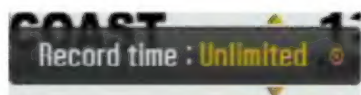
During T1 (tuner 1) recording, PIP channel will be restricted to that particular channel.

In playback mode

- 1** Press PIP button.
- 2** Select the desired channel with PIP PR (+/-).
- 3** Press REC.
Recording will start. The menu as illustrated to the left, will appear on the TV screen.
- 4** Press ▲ / ▼ repeatedly to select the recording time length.
Each press of ▲ / ▼ button changes the recording duration in the sequence shown below.
Unlimited → 5 min → 10 min → 15 min → 20 min → → 960 min
- 5** Press ● (OK).
The elapsed recording time indicator appears on the screen.
Press EXIT to remove indicator.
- 6** Press STOP to stop recording.

Tip

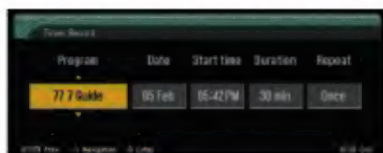
You can check the current recording status by pressing ● (OK) button.



Recording Setup Options (Continued)

Note

The minimum recording time is 1 minute for TV channel and 2 minutes for radio channel. If recorded time is shorter than the minimum recording time, the file is not saved.



Recording Reservation using TIMER RECORD button

1 Press TIMER RECORD button.

The Timer Recording List menu appears.

2 Follow steps 5-6 as shown for Timer Record Settings, General Operation on page 29.

Notes

- If the disk space is insufficient while recording, the unit will stop Record.
- If you want to stop recording, you must press STOP button.
- If new timer recording entry conflicts with existing entry, new entry will not be saved.

Dual Recording features

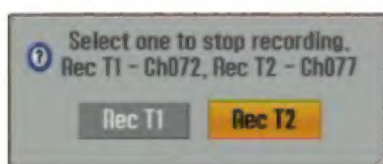
You can record two programs at the same time using the recorder's two built-in TV tuner.

Dual recording is capable when:


- pressing REC to record another channel during normal recording.
- pressing REC to record another channel during Timer Recording.
- timer recording activates during normal recording.
- timer recording activates during dual recording.
You must stop one of two recording to start the timer recording.
Follow steps 1 and 2 as below.

Tip

You can check the current recording status by pressing  (OK) button.



To stop dual recording.

1. Press STOP.
The channel choice menu appears on the TV screen.
2. Select a channel you want to stop recording then press  (OK).
The selected channel's recording stops.
3. If you have stopped T1 (tuner 1) recording and wish to record again, open PIP window, select a channel then press REC.
4. If you want to stop another channel's recording, press STOP.

Note

When T2 (tuner 2) is in recording mode, there are some restrictions to some of the functions.

1. Main screen's channel will be restricted to that particular Channel.
(Other channels can be viewed through PIP window)
2. Timeshift function will not be available.

Playback Options



Normal Playback

Select a program in the Program List menu then start playback (Refer to “Program List” on page 27 to see more detailed information).



Scan

1. Press FF or REW during playback.
The unit will go into SCAN mode.
2. Press FF or REW repeatedly to select the required speed:
X2, X5, X20, X50, X300 (forward or backward).
3. To exit SCAN mode, press PLAY.



Still Picture and Frame-by-Frame Advance

1. Press PAUSE during playback.
The unit will go into PAUSE mode.
2. You can advance the picture frame-by-frame by pressing PAUSE repeatedly on the remote control.
3. To exit PAUSE mode, press PLAY.



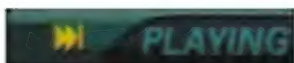
Slow Motion

1. Press PAUSE during playback then press FF.
The unit will go into SLOW mode.
2. To exit SLOW mode, press PLAY.



Jump to Starting position

Press FIRST during playback.



Jump to End position

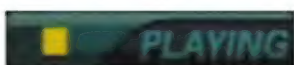
Press END during playback.



Repeat

To repeat a sequence.

1. Press MARK at your chosen starting point.
2. Press MARK again at your chosen end point.
The repeat sequence begins.
3. To cancel the sequence, press MARK.



Stop

Press STOP during playback to see the current broadcast.



Smart Skip (+/-)

Smart Skip is a trick play mode, providing intelligent scene selection in either replay or skip forward modes. Instead of searching with fixed time methods, smart skip searches for active scene clusters then jumps to the first scene in the next or previous available cluster of scenes or back. This is more meaningful to viewers than jumping to a more static scene (anchor person scene from a news broadcast, etc).

During playback, press SKIP+ at the starting point of the section you want to watch. Press SKIP- if you want to go backward.

Note

Pressing SKIP+ afterward pressing SKIP- does not guarantee coming back to the same scene.